

**ABSTRACT OF THE DISCLOSURE**

A multi-layer power backplane system is disclosed for use with various power electronic and other systems. The power backplane includes multiple mechanical, conductor and isolation layers which serve to route power to and from various components.

5 The layers are isolated from one another by support/isolation panels which may receive conductors used to route power. Data signals may also be routed through the system. The system accommodates fluid cooling of the electronic components by an additional layer of conduit support and isolation. The overall system provides a high degree of flexibility and modularity in defining a power backplane for a wide range of circuitry and components

10 which may be mounted thereto once the power backplane is designed and assembled.